

Remarks**I. Status of the Application**

Claims 1-80 are pending in the application. Claims 1-66 have been rejected. Claims 34-35, 43-44, 52, and 60 are amended. Claims 67-80 are added.

II. Claim Rejections - 35 U.S.C. § 102

Claims 1-10, 19-43, and 52-66 have been rejected under 35 U.S.C. 102(e) as being allegedly anticipated by US Publication No. 2006/0010154 (“Prahlad”). Applicants have amended claims 34-35, 43, 52 and 60, and respectfully traverse the rejection.

Independent claim 1 defines a method for migrating one or more data files stored on a source storage device to a target storage device. Claim 1 requires “receiving from a host a data processing request specifying a data file,” and “examining a stub file stored on the target storage device that corresponds to the specified data file, wherein the stub file contains a pointer identifying a source data file stored on the source storage device that corresponds to the specified data file.” Claim 1 also requires “copying the source data file from the source storage device to the target storage device.” Independent claim 34 is a system claim that corresponds to claim 1.

System claims 34-35 have been amended to replace the language “an interface for” by “an interface configured to,” and the language “a processor for” by “a processor configured to” to avoid any inference that the limitations should be interpreted as means-plus-function limitations. These amendments broaden the scope of the claims.

Prahlad discloses a method for accessing data files after the files have been migrated from a first location to a second location. Prahlad copies a file from a first, original, storage

location to a second storage location, leaving a “stub” file at the original location. (Paragraph [0048]). The stub file contains a pointer pointing to the location in the second storage location. [0048]. Consequently, when a client computer attempts to read data from the file, the computer accesses the original storage location in an attempt to find the file; however, the stub file is found. [0049]. The pointer in the stub file redirects the computer to the new location of the file. The computer then reads data from the file at its new location. [0049].

Prahlad does not teach or suggest examining “a stub file stored on the target storage device,” as required by claim 1, or a processor configured to do so, as required by amended claim 34. Prahlad examines a stub file on the source storage device. Prahlad also does not copy “the source data file from the source storage device to the target storage device,” as claimed. This source data file is the file found by examining the “stub file stored on the target storage device,” and has not yet been migrated. Prahlad requires that all files be transferred prior to implementing its method. The embodiment of claims 1 and 34, in contrast, may be used before any files have been transferred.

None of the other cited art teaches or suggests these limitations, either. Accordingly, claim 1 and amended claim 34, and their dependent claims, are patentable over the cited art.

Claims 27 and 60

Independent claim 27 defines a method for migrating one or more data files stored on a source storage device, to a target storage device. Claim 27 requires “accessing a target file stored on the target storage device, wherein the target file is a stub file that contains a pointer identifying a source data file stored on the source storage device” and “copying the identified

source data file to the target storage device.” Independent claim 60 is a system claim that corresponds to claim 27.

System claim 60 has also been amended to replace the language “a processor for” by “a processor configured to” to avoid any inference that the limitations should be interpreted as means-plus-function limitations. These amendments broaden the scope of the claim.

Claims 27 and 60 require copying a data file to “the target storage device” (the device where a stub file is stored). For the reasons set forth above, neither Prahlad, nor any of the other cited art, teaches or suggests this feature. Accordingly, claim 27 and amended claim 60, and their dependent claims, are patentable over the cited art.

Claims 19 and 52

Claim 19 defines a method for migrating one or more data files stored on a source storage device, to a target storage device. Claim 19 requires “receiving from a host a data processing request specifying a data file” and “examining a stub file stored on the target storage device that corresponds to the specified data file, wherein the stub file contains a pointer identifying a source data file stored on the source storage device that corresponds to the specified data file.” Claim 19 further requires “retrieving requested data from the source data file” and “providing the requested data to the host.” Claim 52 is a system claim that corresponds to claim 19.

Claim 52 has been amended to replace the language “an interface for” by “an interface configured to” and the language “a processor for” by “a processor configured to” to avoid any inference that the limitations should be interpreted as means-plus-function limitations. These amendments broaden the scope of the claim.

As discussed above, Prahlad fails to teach or suggest migrating a data file to the device where a corresponding “stub file” is stored, as claimed. The preamble to claim 19 defines “the target storage device” as a storage device to which data files are migrated. Claim 19 further requires examining a “stub file” stored on the “target storage device.” In contrast, Prahlad discloses storing a stub file at the “original” location of a data file, and copying the file to a second location. Prahlad, therefore, does not anticipate claim 19 or amended claim 52.

III. Claim Rejections - 35 U.S.C. § 103

Claims 11-18 and 44-51 have been rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Prahlad in view of U.S. Patent No. 6,981,005 (“Cabrera”). Applicants respectfully traverse the rejection.

System claim 44 has been amended to replace the language “an interface for” by “an interface configured to,” and the language “a processor for” by “a processor configured to” to avoid any inference that the limitations should be interpreted as means-plus-function limitations. These amendments broaden the scope of the claim.

Prahlad is discussed above. Cabrera discloses a technique whereby a stream of data located in a first storage location is registered for migration and according to preset criteria, portions of the stream that are suited to another storage location are migrated to maximize system storage efficiencies. (Abstract).

Neither Prahlad nor Cabrera, individually or in combination, teaches or suggests “examining a stub file stored on the target storage device” that contains “a pointer identifying a source data file,” and “copying the source data file from the source storage device to the target

storage device,” as required by claim 11, or a processor configured to do so, as required by amended claim 44. (Emphasis added). Prahlad does not teach or suggest these limitations, for the reasons discussed above.

While Cabrera discloses a technique for registering data for migration according to preset criteria, nowhere does Cabrera teach or suggest a “stub file” containing a pointer to a data file, as claimed. Nor does Cabrera teach or suggest copying the data file identified by the pointer to the stub file’s storage device, as required by claim 11 and by amended claim 44. Accordingly, claim 11 and its dependent claims, and amended claim 44, and its dependent claims, are patentable over the cited art.

IV. New Claims 67-80

New independent claim 67 defines a method for migrating one or more data files stored in a source storage system to a target storage system. Claim 67 requires “storing, in a target storage system, a stub file comprising information identifying a location of a source data file stored in a source storage system.” Claim 67 also requires “receiving from a host a data processing request specifying the stub file,” “examining the information in the stub file, in response to the request,” and “accessing the source data file based on the information.” New claim 67 further requires “copying the accessed source data file from the source storage system to the target storage system.” Support for new claim 67 is found at pages 11-14, for example.

For the reasons discussed above, none of the cited references teaches or suggests “storing, in a target storage system, a stub file comprising information identifying a location of a source data file stored in a source storage system.” The cited art also fails to teach or suggest

“examining the information in the stub file, in response to the request” and “copying the accessed source data file from the source storage system to the target storage system,” as required by new claim 67. Therefore, new claim 67, and its dependent claims, are patentable over the cited art.

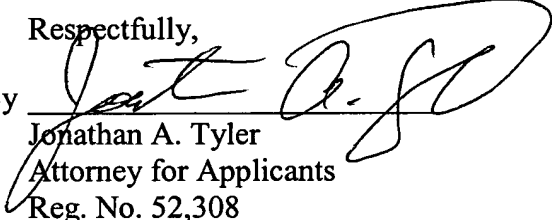
New independent claim 72 is a system claim that corresponds to new claim 67. For the reasons discussed above with respect to claims 67, new claim 72, and its dependent claims, are also patentable over the cited art.

New claim 76 depends from claim 1. Support for new claim 76 is found at page 16, lines 13-22, for example. New claim 77 depends from claim 4. Support for new claim 77 is found at page 11, lines 15-24, for example. New claim 78 depends from claim 11. Support for new claim 78 is found at page 14, lines 5-10, for example. New claim 79 depends from claim 19. Support for new claim 79 is found at pages 11-14, for example. New claim 80 depends from claim 1. Support for new claim 80 is found at page 12, lines 1-9, for example.

For the reasons set forth above, claims 1, 4, 11, and 19 are patentable over the cited art. Therefore, new claims 76, 77, 78, 79, and 80 which depend respectively from claims 1, 4, 11, 19, and 1, are also patentable over the cited art.

V. Conclusion

In view of the foregoing, each of claims 1-80, as amended, is believed to be in condition for allowance. Accordingly, entry and reconsideration of these claims are respectfully requested.

Respectfully,
By 
Jonathan A. Tyler
Attorney for Applicants
Reg. No. 52,308
212-836-7071

Date: March 15, 2007